

Amendments to the Claims

I. Amendments

Please cancel claims 2-19, without prejudice or disclaimer thereto.

Please amend claim 1 as indicated below, and add new claims 20-45.

II. The Claims of the Present Application

Claim 1. **[Currently Amended]** A homogeneous polyoxime composition attached to a sold phase, in which polyoxime molecules present in said composition comprise a ~~first organic~~ baseplate organic molecule ~~linked via a plurality of at least three oxime linkages to said plurality of a second organic molecule~~, said baseplate organic molecule being a polypeptide, and wherein said baseplate organic molecule is linked to at least two second organic molecules, which may be the same or different from one another, the linkages between said baseplate organic molecule and said second organic molecules being oxime linkages ~~being~~ formed by reaction of an orthogonal reactive group on each said second organic molecule, said orthogonal reactive group being a keto group, an aldehyde group, or an amino-oxy group, with a complementary orthogonal reactive group on said baseplate organic molecule.

Claims 2-19. (Cancelled)

- Claim 20. **(New)** The polyoxime composition of claim 1, wherein at least one of said complementary orthogonal reactive group on said baseplate organic molecule comprises an aldehyde or an amino-oxy group.
- Claim 21. **(New)** The polyoxime composition of claim 20, wherein all of said complementary orthogonal reactive group on said baseplate organic molecule comprise an aldehyde or an amino-oxy group.
- Claim 22. **(New)** The polyoxime composition of claim 1, wherein said orthogonal reactive group of at least one of said second organic molecules comprises amino-oxy-acetyl.
- Claim 23. **(New)** The polyoxime composition of claim 22, wherein said orthogonal reactive group of all of said second organic molecules comprise amino-oxy.
- Claim 24. **(New)** The polyoxime composition of claim 1, in which all of said second organic molecules linked to said baseplate organic molecule are the same.
- Claim 25. **(New)** The polyoxime composition of claim 24, wherein each oxime linkage is in the same orientation.
- Claim 26. **(New)** The polyoxime composition of claim 24, wherein at least one orthogonal reactive group present on said baseplate molecule comprises an aldehyde group.
- Claim 27. **(New)** The polyoxime composition of claim 26, wherein a complementary orthogonal reactive group of at least one of said second organic molecules is an amino-oxy group.
- Claim 28. **(New)** The polyoxime composition of claim 1, in which at least one of said second organic molecules linked to said baseplate organic molecule is

different from another second organic molecule linked to said baseplate organic molecule.

- Claim 29. **(New)** The polyoxime composition of claim 28, wherein each oxime linkage is in the same orientation.
- Claim 30. **(New)** The polyoxime composition of claim 28, wherein at least one orthogonal reactive group present on the baseplate organic molecule comprises an aldehyde group.
- Claim 31. **(New)** The polyoxime composition of claim 30, wherein a complementary orthogonal reactive group of at least one of said second organic molecules is an amino-oxy group.
- Claim 32. **(New)** The polyoxime composition of any of claims 1, 24 or 28, further comprising at least one third molecule linked to said baseplate organic molecule, said third molecule being selected from the group consisting of a therapeutic agent, a metal chelating agent, a detectable marker, an imaging agent, and a lipophilic anchor.
- Claim 33. **(New)** The polyoxime composition of claim 32, wherein at least one of said third molecules is an imaging agent or a detectable marker.
- Claim 34. **(New)** The polyoxime composition of claim 32, wherein said polyoxime is immunogenic.
- Claim 35. **(New)** A pharmaceutical composition, comprising the polyoxime composition of any of claims 1, 24 or 28 and a pharmaceutically acceptable carrier.
- Claim 36. **(New)** The polyoxime composition of claim 1, wherein at least one of said second organic molecules comprises a peptide.

- Claim 37. **(New)** The polyoxime composition of claim 1, wherein at least one of said second organic molecules comprises a lipid.
- Claim 38. **(New)** The polyoxime composition of claim 1, wherein at least one of said second organic molecules comprises an oligosaccharide.
- Claim 39. **(New)** The polyoxime composition of claim 1, wherein at least one of said second organic molecules comprises a polyethylene glycol.
- Claim 40. **(New)** The polyoxime composition of claim 1, wherein said solid phase is selected from the group consisting of a silicon chip, a tissue culture plate, a synthetic resin, a natural resin, a lipid layer, and a cell membrane.
- Claim 41. **(New)** The polyoxime composition of claim 1, wherein said solid phase is attached to said baseplate organic molecule.
- Claim 42. **(New)** The polyoxime composition of claim 1, wherein said solid phase is attached to at least one of said second organic molecules.
- Claim 43. **(New)** The polyoxime composition of any of claims 41 and 42, wherein said solid phase is attached to said baseplate organic molecule, or at least one of said second organic molecules, through a bond selected from the group consisting of oxime, thioether and thioester.
- Claim 44. **(New)** A composition comprising an amino-oxy peptide baseplate attached to a solid phase through a bond selected from the group consisting of oxime, thioether and thioester, said amino-oxy peptide baseplate comprising one or more amino acids having a side chain modified with a protected or unprotected amino-oxy group.
- Claim 45. **(New)** A composition comprising a peptide baseplate attached to a solid phase through a bond selected from the group consisting of oxime,

thioether and thioester, said peptide baseplate comprising one or more amino acids having a side chain attached through an oxime bond to a complementary orthogonal specifically active molecule.